REMARKS

The foregoing amendments and these remarks are in response to the Office Action dated July 14, 2004. This amendment is timely filed.

At the time of the Office Action, claims 1-21 were pending. In the Office Action, an objection was raised to claim 12. Claims 1-13 and 19 were rejected under 35 U.S.C. §102(b). Claims 14-18, 20 and 21 were rejected under 35 U.S.C. §103(a). The objections and rejections are discussed in more detail below.

I. Claim Objections

Claim 12 was objected to for insufficient antecedent basis. Claim 12 is cancelled herein, and withdrawal of the objection is thus respectfully requested.

II. Rejections to the claims based upon Art

Claims 1-8 and 19 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,106,203 to Napoli et al. ("Napoli"). Claims 1 and 9-13 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,277,496 to Mayer et al. ("Mayer"). Claims 14-18 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Napoli in view of U.S. Patent No. 3,874,239 to Finney.

Napoli clearly discloses that all the temperature sensors are located inside the passages 115, 215 and 315. Only the output logic is located somewhere outside the exhaust passage. This is in stark contrast with the device and arrangement of amended claims 1 and 19, in which the temperature sensor is arranged on the base member outside the duct. Thus, amended claims 1 and 19 are clearly not taught or suggested by Napoli.

With regard to Mayer, applicant notes that the device and system defined in the present claims uses a different physical principal for detecting the temperature in the duct to that taught in Mayer. In contrast to Mayer, which teaches an optical transmission of light waves characteristic for a temperature, a conductive thermal contact between the temperature sensor and the probe body is established in the inventions defined in the present application.

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Mayer does not teach or suggest any arrangement involving a conductive thermal contact between the temperature sensor and the probe body, nor a temperature sensor located on the base member outside the duct, as defined in amended claims 1 and 19. To the contrary, Mayer describes a high temperature optical probe for an optical gas temperature sensor with a support 12 and a hollow tip 14 in a duct. A light waveguide 26 collects infrared radiation emitted by the tip 14 and guides it outside of the duct to a detector 50.

The temperature is sensed in the Mayer system inside the tip 14, as the high temperatures cause the emission of infrared radiation from the tip 14. The radiation emitted by the tip 14 is guided by the light waveguide 26 to the detector 50. The light waveguide 26 may be a silica fiber or a glass fiber or the like, as can be taken from col. 3, lines 46 to 49. These materials are not suited for establishing a thermal contact but for guiding light waves. Furthermore, silica as well as glass is anything but a good thermal conductor. This can also be taken from the title of Mayer as well as from the abstract, where the disclosure is clearly related to optical probes and optical gas temperature sensors. Contrary to the disclosure of Mayer, the temperature sensor according to the present application clearly is related to the arrangement of a temperature sensor on a probe body with conductive thermal contact between the sensor and the probe body. This is a completely different physical principle.

Further, the temperature sensor according to the teaching of Mayer can be interpreted to be the tip 14 only, or may include all of the tip 14, waveguide 26 and detector 50. Neither the waveguide 26 nor the light detector 50 on their own could be interpreted as being a temperature sensor. Thus, as the tip 14 and at least part of the light waveguide 26 are located within the duct, this in turn means that the temperature sensor is located at least partially inside the duct. Alternatively, if the waveguide 26 and tip 14 are not regarded as part of the temperature sensor, then the temperature sensor is not placed on the base member (support 12). This is also clearly different from the teaching of amended claims 1 and 19 of the present application.

Mayer also clearly relates to a temperature probe with a low thermal response time constant, which for example should be about one second, as can be taken from col. 2, lines 11 to 18 as well as lines 28 and 29. Such a thermal response time constant could not be achieved with a

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conductive thermal contact, where the thermal masses of the connected components must be regarded.

Yet a further difference between the inventions according to the amended claims and Mayer is that the device and system of the present claims comprise several probe sections and one temperature sensor, whereas Mayer discloses only one probe section associated with one temperature sensor.

Thus, neither the Napoli nor the Mayer references, either singly or in combination, teach or suggest the device and system defined in present claims 1 and 19, which are thus believed in condition for allowance. The dependent claims are also believed allowable, because of the further features recited, and because of their dependence upon an allowable base claim.

III. Conclusion

Applicant has made every effort to present claims which distinguish over the prior art, and it is thus believed that all claims are in condition for allowance. Nevertheless, Applicant invites the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. In view of the foregoing remarks, Applicant respectfully requests reconsideration and prompt allowance of the pending claims.

Respectfully submitted,

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J. Rodman Steele, Jr.
Registration No. 25,931
Sarah E. Smith
Registration No. 50,488
AKERMAN SENTERFITT
Post Office Box 3188
West Palm Beach, FL 33402-3188
Telephone: (561) 653-5000

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